

## ABSTRACT

- 1 A method and apparatus for performing NMR measurements suppressing contribution to
- 2 NMR signals from within the borehole. Within the region of examination, the RF
- 3 magnetic field has a spatially varying intensity. NMR signals (free induction decay or
- 4 spin echo signals) are inverted to give spin density as a function of field intensity. This
- 5 inversion is then mapped to spatial positions using the known RF field variation. The
- 6 effect of signals arising from within the borehole can be suppressed. It is also possible to
- 7 obtain an azimuthal image of the spin density.